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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,386	03/10/2004	Eitaro Morita	8305-237US (NP147-1)	3583

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AKIN GUMP STRAUSS HAUSER & FELD L.L.P.
ONE COMMERCE SQUARE
2005 MARKET STREET, SUITE 2200
PHILADELPHIA, PA 19103

EXAMINER

MCABOY, ELLEN M

ART UNIT	PAPER NUMBER
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1764

MAIL DATE	DELIVERY MODE
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05/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/797,386

Applicant(s)

MORITA, EITARO

Examiner

Ellen M. McAvoy

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 are still rejected under 35 U.S.C. 103(a) as being unpatentable over Adams (3,853,772) in combination with Sato et al (6,617,286).

Applicant's arguments filed 16 November 2006 have been fully considered but they are not persuasive. As previously set forth, Adams discloses extreme pressure lubricant compositions having improved water tolerance comprising a lubricating base oil and, as additives, (a) hydrated alkali metal borates in an amount of 1 to 25 weight %, (b) an alkaline earth metal sulfonate which may be overbased, and (c) succinimide compounds. Adams teaches that the compositions are effective in high load conditions such as in the gear sets used in automotive transmission differentials. The hydrated alkali metal borates are set forth in column 2, lines 54 et. seq., and include hydrated potassium borates. The sulfonate component includes calcium sulfonates as set forth in column 6, lines 8-20. The succinimide compounds are set forth in columns 8-9, and Adams teaches that the compositions may include additional additives. See column 9, lines 54-67. Applicant's invention differs by including a borated succinimide to the lubricant compositions. However, as evidenced by Sato et al ["Sato"], such additives are well-known in lubricant compositions suitable for use in transmissions.

Sato discloses a lubricating oil composition for continuously variable transmissions which comprise a base oil of lubricating viscosity and (a) a phosphorus-containing wear additive, (b) a metal detergent including neutral and overbased alkaline earth metal sulfonates and salicylates, and (c) an ashless dispersant such as boron-containing succinimides. Sato teaches that the content of boron in the boron-containing product usually ranges from 0.1 to 5 weight % based on the total weight of the boron-containing succinimide. See column 5, lines 35-61. Having the prior art references before the inventors at the time the invention was made it would have been obvious to the skilled artisan to have followed the teachings of the prior art and to have added the well-known borated succinimide component of Sato to the lubricant compositions of Adams if its known imparted properties were so desired. The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation relied on by the examiner is the teaching in Adams allowing for the addition of other additives to the compositions.

In response, applicant amended independent claim 1 to include that the lubricating base oil has a kinematic viscosity of 1 to 10 mm²/s at 100°C and argued that:

“Applicant has determined that by combining such a low viscosity base oil and specific components, it is possible to optimize both anti-wear properties and fatigue life.” And that “The advantageous effects of the presently claimed composition are demonstrated in Table 1 of the present application. It can be seen that all of the samples in Inventive

Examples 1 to 7, which contained a lubricating base oil having a low kinematic viscosity of $3.8 \text{ mm}^2/\text{s}$ at 100°C and components (A)-(C) in the claimed amounts, exhibited excellent anti-wear properties and long fatigue life.”

This is not deemed to be persuasive because both Adams and Sato disclose a wide range of viscosities for the base oil component. Adams teaches in column 3, lines 42-48, that the lubricating base oil generally has viscosities in the range of from 35 to 50,000 SUS (Saybolt Universal Seconds) at 100°F which encompasses the claimed range. Sato teaches in column 3, lines 48-52, that the base oil should have a kinematic viscosity at 100°C ranging from $0.5\text{-}200 \text{ mm}^2/\text{s}$, preferably $2\text{-}25 \text{ mm}^2/\text{s}$, which also encompasses the claimed range. The results in the specification have been noted; however, the examiner maintains the position that Adams in combination with Sato meets the limitations of the claims as set forth above since Sato teaches a boron-containing ashless dispersant in an amount of 0.1 percent by weight in terms of boron (column 5, lines 58-61). Further, it is not clear that unexpected or improved results have been presented for the entire scope of the claims since component (C), the alkali metal borate or hydrate thereof, may be added to the composition in any amount.

Applicant also argues that:

“Claim 3 recites that the alkali metal borate or hydrate thereof (component (C)) is contained in the composition in an amount of 0.0002 to 0.1 mass % in terms of boron. Sato does not teach or suggest an alkali borate, and such a concentration is not taught or suggested by Adams. Rather, the hydrated alkali metal borate of Adams, $\text{NaBO}_2\text{-H}_2\text{O}$, has a boron content of $11 \text{ g B}/84 \text{ g total} \times 100 = 13 \text{ wt.}\%$. Adams teaches that the hydrated alkali metal borate is contained in an amount of 1 to 25 wt% in the composition. Accordingly, the boron content ranges from $13 \times 1/100$ to $13 \times 25/100 = 0.13$ to 3.25 wt% in terms of boron, and Adams does not teach or suggest the claimed range.”

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This is not deemed to be persuasive because the hydrated alkali metal borate component disclosed in Adams is not limited to $\text{NaBO}_2\text{-H}_2\text{O}$, but broadly taught is $\text{M}_2\text{O-xB}_2\text{O}_3\text{-yH}_2\text{O}$ wherein x is a number from 0.68 to 4, and y is a number up to 5. See column 2, lines 55-62, in Adams. Thus the boron content varies considerably depending upon the variables x and y . The examiner is of the position that it is not clear that dependent claim 3, wherein component (C) is contained in an amount of 0.002 to 0.1 percent by mass in terms of boron, based on the total weight of the composition, patentably distinguishes the claimed composition over the prior art to Adams in combination with Sato.

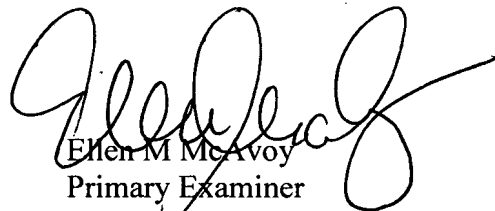
THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen M. McAvoy whose telephone number is (571) 272-1451. The examiner can normally be reached on M-F (7:30-5:00) with alt. Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Ellen M. McAvoy
Primary Examiner
Art Unit 1764

EMcAvoy
May 16, 2007